# ICOM

# Professional Radios

# A COMPREHENSIVE RANGE OF PROFESSIONAL RADIO SOLUTIONS THAT FLEXIBLY MEET YOUR NEEDS

No matter what your communication needs may be, we have the system for you. We go beyond traditional VHF and UHF two-way radios providing peace of mind and keep you connected anywhere and at anytime. Icom continues developing innovative solutions in response to diversifying user needs and can now offer a wide range of two-way radio platforms from analog, digital, wireless LAN, LTE to satellite as a true comprehensive wireless communications company.

## IP Radio – LTE & Hybrid

Icom's IP radio (LTE) provides instantaneous, wide area communication using an LTE (4G) and 3G network*. It enables full-duplex communication, which allows telephone style conversations. The Hybrid IP radio can receive both communications from an LTE radio group and IDAS™ (or analog) group.

\* 3G service availability depends on the network operator. Network coverage provided by a custom SIM card.

## Satellite PTT

Satellite PTT (Push-To-Talk) is a two-way radio system that uses the Iridium® satellite network. It can be used as a communication tool in remote, isolated areas where there are no mobile phones or landline network infrastructure. Even if terrestrial network infrastructure is rendered unusable by human or natural disasters, Satellite PTT can provide a stable back-up, independent from other networks.

## P25 Radio

Icom P25 radios meet public safety customers' demanding needs and afford them the opportunity to make the most of their budgets, with cost-effective digital two-way radio communications products. Communicating with Icom's P25 radios using conventional analog, digital, or mixed mode operation as well as optional Phase 1 and Phase 2 trunking allows customers the ability to upgrade their fleet at their own pace.

## Digital Radio

IDAS™ is Icom's digital land mobile radio system using the NXDN™ or dPMR™ common air interface. IDAS™ offers a complete system of handheld radios, mobile radios, repeaters, network interface/trunking controllers, remote communicator, system manager software and various accessories. IDAS™ is a proven total digital solution that system owners or operators can grow into as their time and budgets allow.

## Analog Radio

Radio technologies and know-how cultivated for over 50 years have been applied to professional analog radio products. Rugged, waterproof, easy to use, clear and powerful audio in a compact design, Icom's analog products provide high performance and reliable communication. They are cost effective solutions that you can rely on and help you improve productivity and efficiency.

## RoIP Gateway

The VE-PG4 is a versatile Radio over IP Gateway device that provides a seamless solution interconnecting various communication systems irrespective of standards and distance such as satellite PTT radio, LTE radio, WLAN radio, IDAS™ digital radio, analog  radio, IP phones and more. The VE-PG4 works as a general IP backbone converting received audio to transmit from other radios.
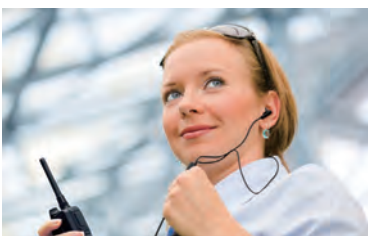
## IP Radio – WLAN

Wireless LAN radio requires no licence to use and allows you to have simultaneous full-duplex communications over a WLAN network. It offers secure communications with encryption and different types of calls such as individual, all, area, priority, group, status calls and short data messaging. You can also connect an IP phone or conventional radio equipment when using it with the RoIP gateway.

## Innovative IP Radios (LTE) with Licensed Professional Radio Mode

The hybrid IP radio, IP730D and IP740D can receive both communications from an IP radio group and IDAS™ (or analog) group. This radio provides nationwide coverage over LTE networks and conventional VHF/UHF professional radio mode (IDAS™ digital/analog mode).

### IP730D/IP740D

#### Hybrid Handheld IP Radio for Local & Nationwide Communications

- Simultaneous TalkListen in LTE Mode • 1500 mW of powerful audio[*1]
- IP67 waterproofing and dust-tight • 24 hours of long lasting battery life[*2]
- Emergency Call, Lone Worker and Man Down functions • Digital Voice Recording/Playback
- Vibration alert function • Built-in Bluetooth® capability • GPS Data Transmission capability in LTE mode • AquaQuake™ function (Also see page 11 for IDAS™ features)

[*1] At 10% audio distortion
[*2] LTE Mode, TX : RX : standby = 5 : 5 : 90. The battery life may be shorter, depending on the distance with the cellular station or the signal strength.
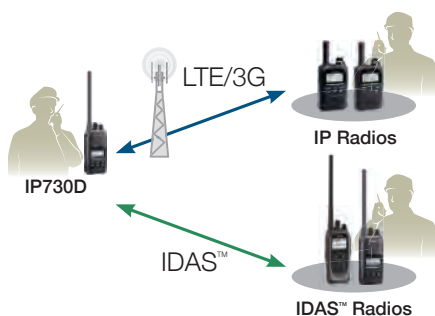
Check the Icom website for more information.

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#### Dual Mode Operation with Main and Sub PTT Buttons

The IP730D series has two PTT buttons for main PTT and sub PTT. You can use one for LTE communication and the other for an IDAS™/Analog channel to answer the call.

Expand an existing IDAS™ system with an LTE network

Communication redundancy, when network congestion occurs or network service is temporarily unavailable

LTE/3G

IP Radios

IP730D

IDAS™

IDAS™ Radios

LTE/3G

IDAS™

IP730D    IP730D
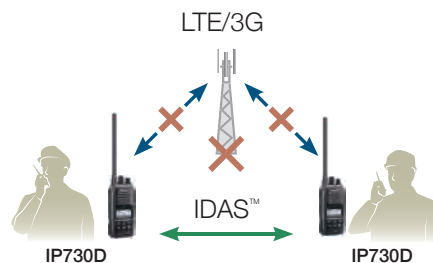
#### Bridge Function

The Bridge function* relays received IDAS™ digital audio to the IP radio group, while transferring the IP radio conversations to the IDAS™ group.

* When using the Bridge function, operating time will be shorter and output power of the radio is reduced to 1 W. The Bridge function may be prohibited in some countries. Please check the legal requirements in your country before using this function.

IDAS™ Group ⟷ IP730D ⟷ LTE Group

IDAS™

IDAS™ Radios

IP730D

LTE/3G

IP Radios

* Network coverage provided by a custom SIM card. Service availability depends on the country.

# IP Radios – LTE

## Instant Wide Area Coverage Over an LTE (4G) and 3G Network*

### Simultaneous TalkListen

*Talk Listen Simultaneous*

Icom's IP Radios provide Simultaneous TalkListen, which allow users to talk and listen at the same time. This allows smooth, telephone-like conversation, or the ability to break into a call if required.

### Multiple-user Communication

Multiple users in the call groups can initiate calls instantaneously. This removes the need to wait for available channels to communicate.
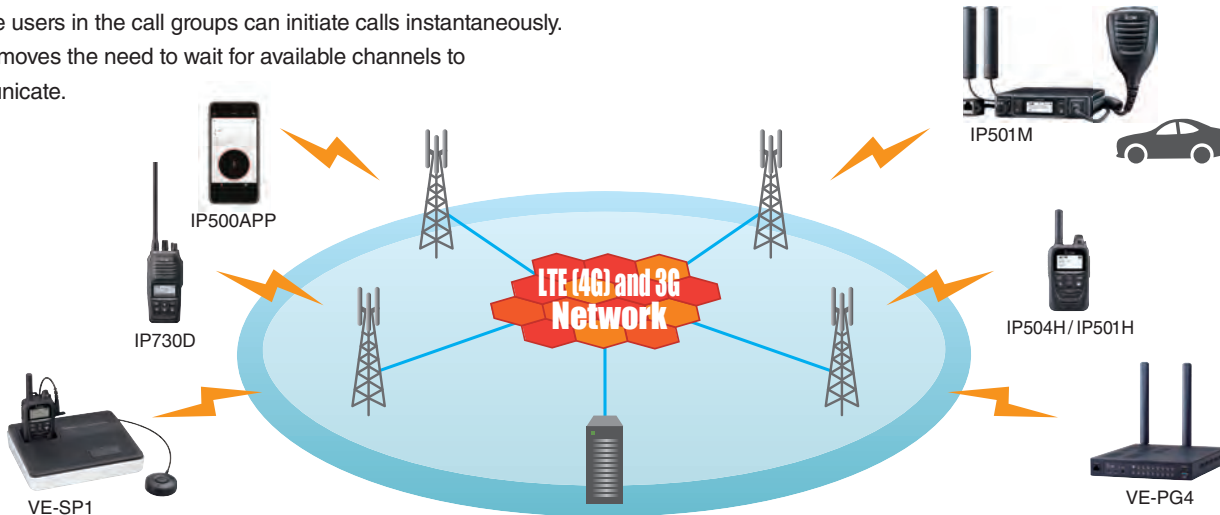
### One-to-many Communication

Unlike mobile cell phones, IP radio users can immediately start talking to all the radios in the same talkgroup, with just a push of a "PTT" transmit button.

\* Network coverage provided by a custom SIM card.
3G service availability depends on the network operator.

IP501M

IP500APP

IP730D

LTE (4G) and 3G Network

IP504H / IP501H

VE-SP1

VE-PG4

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## IP504H / IP501H

### Compact and Durable IP Handheld

• 900 mW loud and high quality audio (IP504H)  • IP67 dust-tight and waterproof
• Emergency Call, Lone Worker and Man Down functions • Voice Record/Playback functions
• Vibration Alert function notifies of incoming calls • Built-in Bluetooth® capability and GPS
• Full-Duplex communication  • 17 hours battery life (with BP-272)  • Provisioning/FOTA (Firmware Over-the-Air)

Photo shows IP501H

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## IP501M

### Mobile IP Radio Interoperable with the IP504H / IP501H

• Built-in Bluetooth® capability and GPS  • Preprogrammed message transmission and reception
• An Ethernet port for data communication (The optional VE-PG4 is required.)
• Emergency call and Lone Worker functions  • Noise Cancelling function (TX only)  • IP54
• D-SUB 25-PIN connector with the optional OPC-2407 cable for interfacing other devices and various controls  • Both 12 and 24 volt compatible  • Provisioning/FOTA (Firmware Over-the-Air)

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## VE−SP1

### Dispatch Converter

• Portable operation with eight LR6 (AA) cells  • Built-in loudspeaker and high sensitivity external microphone
• Charges the radio when using the AC adapter

\* The IP radio is not supplied.

## IP500APP

### iOS™/Android™ Application to Communicate with IP Radios*

• Full-Duplex communication  • Short text message • Voice Recording/Playback function
• Address book • TX/RX history

\* IP500APP for iOS™: iOS™ version 12 or later
IP500APP for Android™: Android™ version 8.0 or later
IP500APP service may not be available depending on the country.

# Satellite PTT Radios

## Real-Time Communications Across the Globe

SATELLITE PTT (Push-To-Talk) is a two-way radio system that uses the Iridium® satellite network. It can be used as a communication tool in remote, isolated areas and the sea where there are no mobile phones or communications infrastructure. Even if the terrestrial network infrastructure is rendered unusable by human or natural disasters, SATELLITE PTT can provide a stable back-up, independent from other networks.
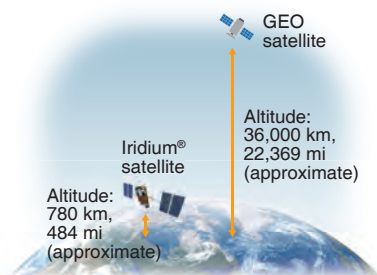
Iridium® satellite

Iridium® satellite

Iridium® satellite

LAN cable

RoIP
- IDAS™
- Analog Transceiver
- Other Communication Systems

IP Transceivers
- WLAN Transceiver
- IP Transceiver

IP Phone system

External Equipment
- USB Drive
- Microphone
- PA System
- Sensors

IC-SAT100

IC-SAT100M

IC-SAT100

IC-SAT100

LAN cable

IC-SAT100M

RoIP gateway VE-PG4

## One-to-Many Communications

Unlike satellite phones, IC-SAT100/M users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.

## Total Global Coverage, including the Poles[1]

The Iridium® satellite network covers the entire globe including both poles, and can provide wide area global communications anywhere on the planet.

## Real-Time, Low-Latency Communication

GEO satellite

Altitude: 36,000 km, 22,369 mi (approximate)

Iridium® satellite

Altitude: 780 km, 484 mi (approximate)

Using 66 Low Earth Orbit (LEO) Iridium® satellites, the IC-SAT100/M provides low-latency communication, and broader, more reliable network coverage, compared to Geosynchronous Equatorial Orbit (GEO) satellites.

## Conventional Radios and IP Phones Interconnection[2]

With a VE-PG4 RoIP gateway, the IC-SAT100/M can interconnect with an IP phone, IP, WLAN, IDAS™ digital (Type-D multi-site trunking and conventional systems.) and analog transceivers.

*1 Subscription contracts are required for using the IC-SAT100/M. Depending on the country or region, carrying and/or use of the IC-SAT100/M may be prohibited.
*2 Optional VE-PG4 RoIP gateway and OPC-2412 connection cable are required for the IC-SAT100. Optional VE-PG4 RoIP gateway and a LAN cable are required for the IC-SAT100M.

# Satellite PTT Radios

iridium® connected

## IC-SAT100
### Compact Handheld

- IP67 waterproofing and dust-tight
- 1500 mW of powerful audio
- 14.5 hours of long lasting battery life*
- Emergency key on the top panel
- Short Data Message
- Voice Recording function
- Built-in Bluetooth® capability
- SMA type antenna connection
- USB charging
- AES 256-bit encryption for security
- Multiple language display

* TX : RX : standby = 5 : 5 : 90.

FA-S103U   AH-40
BC-247   HM-222H

Docking Station for In-Vehicle Use

## IC-SAT100M
### In-Building and Vehicle Use

- Install the antenna unit (with RF unit) to the rooftop, and use the radio from a vehicle, indoors, even from the basement
- Easy wiring works between the antenna unit (with RF unit) and main unit using a LAN cable (Cat 5e)*1
- Power supply requirement: 13.2 V/26.4 V DC
- Antenna unit with RF unit: IP67, Main unit: IP54, Microphone: IP55  • 1500 mW audio output
- Voice Recording function  • Short Data Message
- Built-in Bluetooth® capability
- Integrated GPS receiver  • AES 256-bit encryption
- Multiple language display (English, Chinese, French, Japanese, and Spanish)

*1 User supplied LAN cable is required to replace the supplied 20 m, 65.6 ft LAN cable. Maximum 100 m, 328 ft.

Antenna unit

Microphone ▶

◀ Main unit

## Types of External Antennas for IC-SAT100

By replacing the IC-SAT100 antenna with an external antenna, satellite communication is possible even from a vehicle or building. Select the most suitable antenna according to the installation location and application.

AH-40
1.5~6.5 m
4.9~21.3 ft
For Vehicle and 1 Story buildings*1*4

AH-38
10~20 m
32.8~65.6 ft
For 2 to 6 Story Buildings*2*4

AH-41
Max. 169 m
Max. 554.5 ft
For 7 to 50 Story Buildings*3*4

## IC-SAT100M In-Building Use

You can flexibly install the IC-SAT100M and the antenna unit (with RF unit) with only a LAN cable (Maximum 100 m, 328 ft).*5

20~100 m
65.5~328 ft
LAN
For 7 to 50 Story Buildings*4*5

*1 Optional OPC-2422 coaxial cable (5 m, 16.4 ft) is required for more than 1.5 m, 4.9 ft extension.
*2 Optional OPC-2113 or user supplied coaxial cable is separately required. Cable loss requirement is less than 3.4 dB loss at 1621 MHz.
*3 Optional OPC-2462 or user supplied coaxial cable is separately required. Cable loss requirement is 12.5 - 13.0 dB loss at 1621 MHz.
*4 The distance from the main unit to the antenna is a rough guideline. The height of the building is an estimate assuming that the height of one floor is 3.5 m, 11.5 ft .
*5 User supplied LAN cable is required to replace the supplied 20 m, 65.6 ft LAN cable.

Check the Icom website for more information.

## IC-F7000 Series

### P25 Conventional and Trunking, Smallest and Lightest of Its Class

• P25 Phase 1/2 Trunking capabilies • 1024 channels • IP68
• Color display • Integrated GPS • Bluetooth® capability • microSD card slot • Voice recording • OTAP • USB connector • Active noise canceller
• FIPS certified AES/DES encryption* • OTAR • 14 hours battery life (with BP-284) • Motion/Stationary sensor • Man down/Lone worker • Vibration alert • Voice announcement • 1300 mW loud audio
* Optional

## IC–F7500 Series

### P25 Conventional and Phase 1/2 Trunking Rugged Mobile Radio with Superior Class Leading Audio

- P25 Phase 1/2 Trunking capabilities • 1024 channels
- Flexible configurations with detachable front panel • IP55
- Color display • Integrated GPS • Bluetooth® capability
- microSD card slot • Voice recording • OTAP • USB connector
- Active noise canceller • FIPS certified AES/DES encryption* • OTAR
- Lone worker • Voice announcement

\* Optional

## IC–F9511HT

### 110W RF Power, P25 Trunking and P25 Conventional Modes

- P25 Phase 1 Trunking capability • 512 channels • IP54 • Large multi-function full dot matrix display • Detachable front panel capability
- Lone worker • FIPS certified AES/DES encryption* • OTAR
- 15 W audio amplifier

\* Optional

## IC–FR9000 Series

### P25 Conventional Repeater for Repeater and Base Modes

- 110 W/100 W (VHF/UHF) output power at 100% duty cycle operation
- 500 memory channels capacity and 16 key buttons • S-meter and output power bar graph display • D-SUB 25-pin accessory connector for remote control
- P25 conventional/FM mixed mode operation
- P25 self-test mode and key test mode • Automatic error detection

## CS–OTPM2

### Easily Reconfigure Radios with Over-the-Air Programming
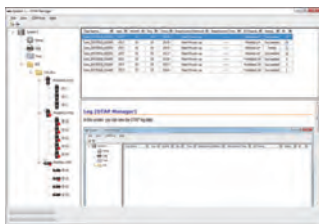
- Radios can be reconfigured in a short period of time by transmitting only the updates
- Up to 10,000 sessions are logged for review and rescheduling • Both original and new data can be kept in the radios until the OTAP process is completed
- System operator can change language setting of CS-OTPM2
- Manages up to 100,000 radios

 \* Compatible models: IC-F7000/IC-F7500 series

# IDAS™ Digital Radios

**Flexible Digital Migration Solutions
with Advanced IP Network Integration**

## Multiple-site Configurations

IDAS™ systems provide various digital radio solutions from simple peer to peer operation between two radios, up to multi-site wide area networks. Further coverage is enhanced with IP interconnection.

## Digital Clarity

By adopting the industry standard AMBE+2™ Vocoder and advanced FEC (Forward Error Correction) coding, IDAS™ systems provide improved communication quality, clarity and reliability.

## Effective System Management

Simple and efficient management is critical for systems of any size. IDAS™ provides effective system management with such features as OTAP and administration applications.

## NXDN™/dPMR™ Protocol Choice

The IDAS™ digital radio system has two protocol choices, NXDN™ or dPMR™. Both protocols are open digital radio standards using 6.25 kHz FDMA narrowband technology. With this flexible choice, the IDAS™ radio system allows for interoperability with other manufacturers equipment to add to/replace existing NXDN™ and/or dPMR™ systems.

## System Scalability According to Communication Traffic and Coverage

Depending on the communication traffic and coverage, an IDAS™ radio system can be expanded from single site conventional to multi-site trunking, to match your communication needs.

### Multi-site Conventional
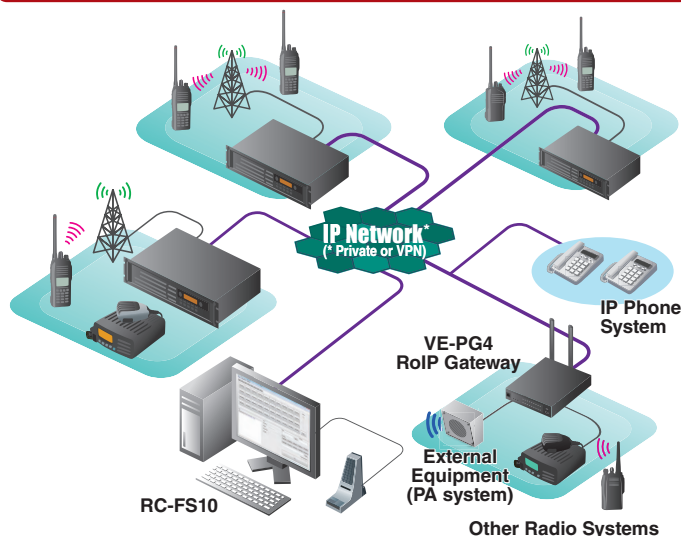


- 6.25 kHz digital migration
- Digital/analog mixed mode operation
- Up to 16 IDAS™ repeater sites connection over an IP network
- Telephone interconnection (with VE-PG4)
- Subscriber voting and system receiving voting

### Type-D Multi-site Trunking
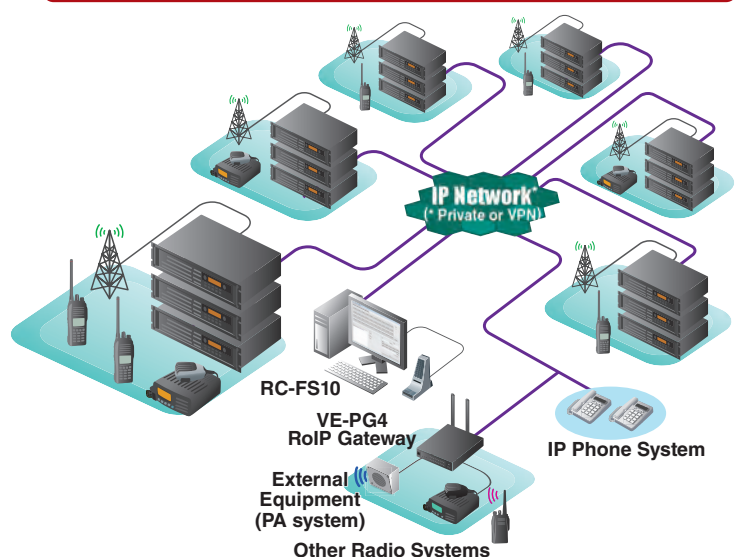


- Distributed channel system which does not use a dedicated control channel
- Up to 30 channels per site and up to 48 sites connection over an IP network
- Up to 60,000 individual IDs and 60,000 group IDs with fleet management
- Telephone interconnection (with VE-PG4)

# IDAS™ Simulcast System

## Wide Area Coverage on a Single Pair of Frequencies

The IDAS™ Simulcast (NXDN™ protocol) synchronizes multiple repeater sites* for seamless wide area repeater coverage using just a pair of frequencies. Each repeater site in the system is simply composed of only a network controller, GPS antenna and repeater. A PPS (Pulse Per Second) signal from the GPS and an NTP server are used to synchronize the downlink signals.

* The maximum number of sites for an IDAS™ Simulcast system is 32.



**Multi-Site Conventional System**

Site 1 **f1** (Frequency)
Site 2 **f2**
Site 3 **f3**
Site 4 **f4**

**IP Network** (Private or VPN)

A unique pair of frequencies is required for each repeater site.

**Simulcast Repeater Site**
(Up to 32 sites per system)

**IC-FR5300 series**

**+**

**UC-FR5300 #14 including CF-FR5300SC**
(1 unit required per site)

**UX-241 GPS Antenna**

**Simulcast System**

Site 1 **f1**
Site 2 **f1**
Site 3 **f1**
Site 4 **f1**

**IP Network** (Private or VPN)

**NTP Server**

**Master repeater** (Controller)

Overlap area

A pair of frequencies coverage

*Note: Private IP Network or VPN Tunnels through the Internet.

## Ideal 6.25 kHz FDMA Technology for Simulcast

6.25 kHz FDMA technology has a lower symbol rate than other technologies, so it has an advantage regarding voice quality degradation due to latency.

## Seamless Coverage

Simulcast repeaters transmit a signal on the same frequency and at the same time with GPS synchronization. Using the digital signal, the IDAS™ simulcast system can greatly reduce signal degradation in overlapping areas.
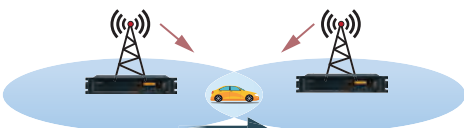


Repeaters transmit a downlink signal in sync at the same frequency.

## Scalability and Flexibility

Installation and maintenance of a simulcast system could not be easier. You can effortlessly expand the coverage area by just adding repeaters. Those repeaters can be integrated into the network with simple setup (no reprogramming of radio terminals is necessary).

## Abundant IDAS™ Radio Lineup

All NXDN™ compatible IDAS™ radio terminals can be used on the IDAS™ simulcast system. In addition, the radio terminals wait for a call without scanning, so the battery consumption can be reduced.

## IC−F3400D/IC−F4400D Series

### IDAS™ The Smart Digital Solution

- 1024 channels (32 channels for non-display models) • IP68 • Color display
- Integrated GPS • Bluetooth® capability • microSD card slot • Voice recording • OTAP • OAA
- USB connector • Active noise canceller • AES*/DES encryption
- 10.5 hours battery life (with BP-283) • Motion/Stationary sensor • Man down/Lone worker
- Vibration alert • Voice announcement • 1300 mW loud audio
* Optional

**Conventional**　**Simulcast**　**Single/Multi-Site Trunking (Optional)**

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## IP730D/IP740D

### Hybrid Handheld IP Radio for Local & Nationwide Communications

- 128 channels/8 zones • Rotary encoder
- DTMF code transmission with optional DTMF microphone, HM-245T*
- OTAP function • Up to 500 ID numbers for IDAS™ mode • 1500 mW loud audio (10% distortion)
- Individual, Group and All calls • Talk back • CTCSS and DTCS for analog mode
* DTMF microphone, HM-245T will be available later. (Also see page 3 for Hybrid features)

**Conventional**　**Simulcast**

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## IC−F52D/IC−F62D

### 5 W Power Pack, Super Compact Body

- 512 channels • IP67 • Full dot matrix display for 14 characters with status icons
- Bluetooth® capability • Voice recording • OTAP • OAA • Active noise canceller
- 13 hours battery life (with BP-290) • Motion/Stationary sensor • Man down/Lone worker
- Vibration alert • Voice announcement • 1300 mW loud audio

**Conventional**　**Simulcast**　**Single/Multi-Site Trunking (Optional)**

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## IC−F1100D/IC−F2100D Series

### Compact, Waterproof and Superiour Audio Clarity

- 128 channels (16 channels for non-display models) • IP67 • Motion/Stationary sensor
- Man down/Lone worker • 18 hours battery life (with BP-280) • 1500 mW loud audio • OAA
- Voice announcement

**Conventional**　**Simulcast**　**Single-Site Trunking**

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## IC−F3260D/IC−F4260D Series

### Advanced Digital Radio with Built-in GPS Receiver*

- 512 channels • IP67 • Large multi-function full dot matrix display • Integrated GPS*
- 10.5 hours battery life (with BP-232WP) • Man down*/Lone worker
- Status and short data message (SDM) • Remote monitor • 800 mW loud audio
*Depending on the version.

**Conventional**　**Simulcast**　**Single/Multi-Site Trunking**

## IC–F3230D/IC–F4230D Series

### Waterproof Type-D Multi-Site Trunking Radio

• 128 channels • IP67 • NXDN™ Type-D multi-site trunking • Lone worker • 19/17 hours battery life (with BP-232WP, VHF/UHF) • 1000 mW loud audio • Voice announcement

**Conventional**    **Simulcast**    **Single/Multi-Site Trunking**

## IC–F52D–UL/IC–F62D–UL

### UL Approved Intrinsically Safe Digital Radio

• 512 channels • IP67 • Bluetooth® capability
• Voice recording • OTAP • OAA • Active noise canceller
• 10 hours battery life (with BP-292UL) • Motion/Stationary sensor • Man down/Lone worker • Vibration alert
• Voice announcement • 800 mW loud audio

**Conventional**    **Simulcast**
**Single/Multi-Site Trunking (Optional)**

**UL Classification Rating**
Intrinsically safe: Class I, Division 1, Groups C D; Class II, Division 1, Groups E F G; Class III. T3C.
Non-incendive: Class I, Division 2, Groups A B C D.
Ambient temperature: –20°C (–4°F) to +60°C (+140°F)
Intrinsically Safe when used with BP-292UL battery pack.

DO NOT use the transceiver with any other equipment not specified in the option list (Pages 23–28).
Please ask your dealer to ensure the UL Classification rating is acceptable for the intended place of use.

# IDAS™ Mobile Radios

## IC−F5400D/IC−F6400D Series
### Superb Performance and a Comprehensive Range of Features

- 1024 channels (99 channels for segment display models) • Flexible configurations with detachable front panel[1] • IP55 • Color display[1] • Integrated GPS • Bluetooth® capability
- microSD card slot • Voice recording • OTAP • OAA • USB connector • Active noise canceller
- AES[2]/DES encryption • Lone worker • Voice announcement

[1] For IC-F5400D/IC-F6400D   [2] Optional

**Conventional**   **Simulcast**   **Single/Multi-Site Trunking (Optional)**

## IC−F5060D/IC−F6060D Series
### Versatile, Multi-Function Mobile Series

- 512 channels • Front panel detachable • IP54 • Large multi-function full dot matrix display
- D-SUB 25-pin ACC connector • Lone worker • Status and short data message (SDM)
- Remote monitor

**Conventional**   **Simulcast**   **Single/Multi-Site Trunking**

## IC−F5330D/IC−F6330D
### Vehicle and In-Building Use Radio with PoE Connection

- 128 channels • NXDN™ Type-D single-site trunking • Flexible Power over Ethernet (PoE) connection between RF unit and remote control microphone* • High contrast, wide viewing angle, negative type display • Bluetooth® capability • Emergency and Lone Worker functions
- Status and short data message (SDM) • Optional D-SUB connector cable.

* Up to 100 m, 328 ft Ethernet cable

**Conventional**   **Simulcast**   **Single-Site Trunking**

## IC−F5120D/IC−F6120D Series
### Solid Fundamental Digital Radio

- 128 channels • 4 W powerful front mounted speaker • Lone worker • Status and short data message (SDM) • Remote monitor • GPS receiver connection with optional ACC cable

**Conventional**   **Simulcast**   **Single-Site Trunking**

## IC–FR5300/IC–FR6300

### Two Channels in One Box Repeater, Compatible with the Affordable, Low-Complexity Digital Simulcast

• Digital conventional mode and analog FM with auto selection • 50 W at 50%, 25 W at 100% duty cycle operation (Ambient temperature: 25°C) • With the optional UC-FR5300 #14 network controller and GNSS antenna, the IC-FR5300/IC-FR6300 can be compatible with digital simulcast systems • Optional network controllers for multi-site conventional or trunking system configuration • "Two channels in one box" configuration with optional UR-FR5300/UR-FR6300

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## RC–FS10

### Virtual Radio/PC Dispatch

• PC remote communicator for IDAS™ conventional, NXDN™ Type-D multi-site trunking and analog radio systems (VE-PG4 is required for analog radio systems.) • Up to eight different IDAS™ and analog radio systems can be programmed • Up to 40 programmable buttons. Short data message, status and DTMF can be sent • Caller ID, called ID, name and call type information are displayed • Optional HM-152 or SM-26 microphone

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## RS–MGR1

### Enhance System Management for NXDN™ Type-D Trunking Systems
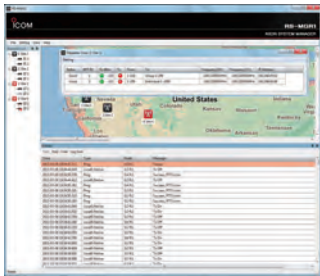
• Provides real-time monitoring, system alerts and log search functions • Repeater properties show condition summary, system information, interface (traffic statistics), repeater condition details and ping status of each repeater • Registration log, communication log, traffic log and search log can be searched and downloaded with extensive filter settings

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## CS–OTPM1

### Easily Reconfigure Radios with Over-The-Air Programming
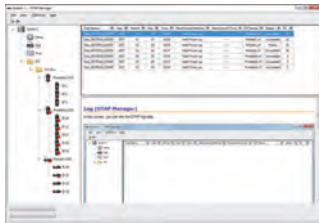
• Remotely reconfigure radios while in the field • Radios can be reconfigured in a short period of time by transmitting only the updates • Single programming data can transmit to a whole fleet with only one click • Up to 10,000 sessions are logged for review and rescheduling
• Manages up to 100,000 radios

* Compatible models: IC-F3400D/IC-F4400D series    IC-F52D/IC-F62D    IC-F52D-UL/IC-F62D-UL
   IC-F5400D/IC-F6400D series

# Analog Radios

## IC-F1000/IC-F2000 Series
### Slim, Compact Dimensions with IP67 Waterproofing
• 128 channels (16 channels for the non-display model) • Motion/Stationary sensor
• Man down/Lone worker • 14 hours battery life (with BP-279) • 1500 mW loud audio
• Voice announcement • 16 codes inversion voice scrambler

## IC-F3000/IC-F4000 Series
### Affordable, High Performance Radio
• 16 channels • IP54 • Lone worker function • 14 hours battery life (with BP-264) • Built-in 2-Tone,
5-Tone, CTCSS and DTCS • 800 mW (typ.) loud audio speaker • Internal VOX capability for hands-
free operation

## IC-F5020/IC-F6020 Series
## IC-F5010/IC-F6010 Series
### Hardworking Mobile Radios
• 2 models for display or non-display • 128 channels (IC-F5020/IC-F6020 series) or 8 channels
(IC-F5010/IC-F6010 series) • Lone worker function • 4 W (typical) front mounted speaker
• External device connection with optional ACC cable

# HF Radio

## IC-F8101
### A Professional HF, All in One Package
• 2G ALE (Automatic Link Establishment), MIL-STD-188-141B compatible • 125 W* PEP output
power (* J3E/A1A modes depending on the transceiver version) • 100% duty cycle operation (SSB
voice TX) • IP54 • 2400 bps MELPe/TWELP Vocoder and 256-bit AES encryption* with RapidM
TC4-LP (* The function availability depending on the transceiver version)

# MURS License-Free Radios

## IC-V10MR

**Professional Grade License-Free Radio
Slim, Compact Dimensions with IP67 Waterproofing**

- 5 MURS frequencies • 2 W RF output power • 2-Tone, MDC, CTCSS and DTCS capabilities
- IP67 waterproof • 16 hours battery life (with BP-279) • 1500 mW loud audio
- Built-in Motion sensor • Lone Worker and Man Down functions • Up to 2 miles in a work site*
- Download free programming software

## IC-V3MR

**Rugged, Loud and Reliable Professional License-Free Radio**

- 5 MURS frequencies • 2 W RF output power • 2-Tone, MDC PTT ID, CTCSS and DTCS capabilities
- IP54 Water and Dust protection • 24 hours battery life (with BP-298)
- 1500 mW loud audio from internal speaker
- 1500 mW audio output from optional BTL speaker-microphone, HM-222HLWP
- Lone Worker function • Up to 2 miles in a work site* • Download free programming software

* Communication range may differ depending on operating environment or weather conditions, etc.

# RoIP Gateway

## Radio Gateway — Link LTE Radios to Digital/Analog Radios, Satellite PTT Radios, WLAN Radio, IP Phone and More

**The VE-PG4 is a versatile RoIP (Radio over IP) gateway unit, which seamlessly interconnects various communication systems. The built-in LTE module\* provides virtually nationwide communication coverage.**

* Service availability depends on the country. Network coverage provided by a custom SIM card.

## Communication Links



**VE-PG4**

# P25 Radio Feature Comparison

| | IC-F7000 SERIES | | IC-F7500 SERIES | | F9500 SERIES |
|---|---|---|---|---|---|
| | IC-F7010T/S IC-F7020T/S | IC-F7040T/S | IC-F7510 IC-F7520 | IC-F7540 | IC-F9511HT |
| **Frequency Range** | 136–174 MHz / 380–470 MHz 450–512 MHz | 769–869 MHz | 136–174 MHz / 380–470 MHz 450–512 MHz | 769–869 MHz | 136–174 MHz |
| **Channels** | 1024 | | 1024 | | 512 |
| **Channel Spacing** | 12.5/25 kHz | 12.5/20/25 kHz | 12.5/25 kHz | 12.5/20/25 kHz | 12.5/15/30 kHz |
| **Dimensions**[1] (mm; in) (W × H × D; Projections are not included) | 53.6 × 123.5 × 38.2; 2.1 × 4.9 × 1.5 | | 174 × 55 × 150; 6.9 × 6.6 × 1.6 | | 175 × 60 × 279; 6.9 × 2.2 × 5.9 [3] |
| **Weight**[1] (approx.) | 355 g; 12.5 oz | 345 g; 12.2 oz | 1500 g; 3.3 lb | | 4.7 kg: 10.4 lb[4] |
| **RF Output Power** (High) | 5 W | 3 W | 50 W (VHF), 45 W (UHF) | 30/35 W (700/800 MHz) | 110 W |
| **IP Rating** | IP68 | | IP55 | | IP54 |
| **Operating Time**[1][2] (hours) | 14 | | N/A | | N/A |
| **Display** | Color LCD | | Color LCD | | Monochromatic LCD |
| **Keypad** | Yes | | Yes | | Yes |
| **AF Output Power** | 1300 mW typ. | | 4 W typ. | 4 W typ. | 15 W typ. (External SP) |
| **Analog Conventional** | Yes | | Yes | | Yes |
| **P25 Conventional** | Yes | | Yes | | Yes |
| **P25 Trunking** Phase 1 (FDMA) | Optional | | Optional | | Optional |
| **P25 Trunking** Phase 2 (TDMA) | Optional | | Optional | | No |
| **Encryption** AES | Optional | | Optional | | Optional |
| **Encryption** DES | Optional | | Optional | | Optional |
| **FIPS 140-2 Level 1** | Optional | | Optional | | Optional |
| **P25 Conventional Voting Scan** | Optional | | Optional | | No |
| **P25 Packet Data Service** | Optional | | Optional | | No |
| **OTAP Function** | Optional | | Optional | | No |
| **CTCSS/DTCS** Encoder/Decoder | Yes | | Yes | | Yes |
| **2-Tone** Encoder/Decoder | Yes | | Yes | | Yes |
| **DTMF Autodial** | Yes | | Yes | | Yes |
| **Analog Voice Scrambler (Inversion)** | Yes | | Yes | | Yes |
| **MDC 1200** | Yes | | Yes | | Yes |
| **Front Panel Programming** | Optional | | Optional | | Yes |
| **Man Down** | Yes | | No | | No |
| **Lone Worker** | Yes | | Yes | | Yes |
| **Voice Announcement** | Yes | | Yes | | No |
| **Vibration Alert** | Yes | | No | | No |
| **Voice Recorder** | Yes | | Yes | | No |
| **Bluetooth® Capability** | Yes | | Yes | | No |
| **GPS Receiver** | Yes | | Yes[5] | | No |
| **Front Panel Separation** | N/A | | Optional | | Yes |
| **COMMANDMIC™ Capability** | N/A | | Yes | | No |

[1] With standard battery pack [2] Conventional mode. 5:5:90 duty cycle, power save ON
[3] RF unit [4] With controller and cable [5] UX-241 antenna is required.

All stated specifications and features are subject to change without notice or obligation.

# IDAS™ Handheld Radio Feature Comparison

| | IC-F3400D/IC-F4400D SERIES | | IP730D IP740D | IC-F52D IC-F62D | IC-F1100D/IC-F2100D SERIES | | IC-F3230D IC-F4230D SERIES | IC-F3260D IC-F4260D SERIES | IC-F52D-UL IC-F62D-UL |
|---|---|---|---|---|---|---|---|---|---|
| | IC-F3400DT/DS IC-F4400DT/DS | IC-F3400D IC-F4400D | IP730D IP740D | IC-F52D IC-F62D | IC-F1100DT/DS IC-F2100DT/DS | IC-F1100D IC-F2100D | IC-F3230DT/DS IC-F4230DT/DS | IC-F3261DT/DS/3DT/DS IC-F4261DT/DS/3DT/DS | IC-F52D-UL IC-F62D-UL |
| **Frequency Range** | 136–174 MHz; 380–470 MHz; 450–512 MHz | 136–174 MHz; 380–470 MHz; 450–512 MHz | 136–174 MHz; 350–470 MHz; 400–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz | 136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz |
| **Channels** | 1024*1 | 32 | 128 | 512 | 128 | 128 | 128 | 512 | 512 |
| **Digital Channel Spacing** | 6.25/12.5 kHz | 6.25/12.5 kHz | 6.25 kHz | 6.25/12.5 kHz | 6.25 kHz | 6.25 kHz | 6.25 kHz | 6.25 kHz | 6.25/12.5 kHz |
| **Dimensions*2** (mm; in) (W × H × D; Projections are not included) | 53.6 × 123.5 × 29.3; 2.1 × 4.9 × 1.2 | 53.6 × 123.5 × 29.3; 2.1 × 4.9 × 1.2 | 61.7 × 140.5 × 42.8; 2.4 × 5.5 × 1.7 | 56 × 91.5 × 29; 2.2 × 3.6 × 1.1 | 52.2 × 111.8 × 34.1; 2.1 × 4.4 × 1.3 (DT); 52.2 × 111.8 × 29.4; 2.1 × 4.4 × 1.2 (DS) | 52.2 × 111.8 × 29.4; 2.1 × 4.4 × 1.2 | 53 × 120 × 37; 2.1 × 4.7 × 1.5 | 53.5 × 142.7 × 39.5; 2.1 × 5.6 × 1.6 | 56 × 92 × 34.1; 2.2 × 3.6 × 1.3 |
| **Weight*2** (approx.) | 305 g; 10.8 oz (VHF); 300 g; 10.6 oz (UHF) | 305 g; 10.8 oz (VHF); 300 g; 10.6 oz (UHF) | 320 g; 11.3 oz | 230 g; 8.1 oz | 280 g; 9.9 oz (DT); 270 g; 9.5 oz (DS) | 260 g; 9.2 oz | 340 g; 12 oz | 410 g; 14.5 oz (VHF); 400 g; 14.1 oz (UHF) | 270 g; 9.5 oz |
| **RF Output Power** (High) | 5 W | 5 W | 5 W | 5 W | 5 W (VHF), 4 W or 5 W* (UHF) *Depending on the version | 5 W (VHF), 4 W or 5 W* (UHF) *Depending on the version | 5 W (VHF); 4 W (UHF) | 5 W | 5 W |
| **IP Rating** | IP68 | IP68 | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| **Operating Time*2*3** (hours) | 10.5 | 10.5 | 24 (LTE mode); 13 (IDAS mode) | 13 | 18 | 18 | 19 (VHF); 17 (UHF) | 12 (Non-GPS ver.); 10.5 (GPS ver.) | 10 |
| **Display** | Yes | No | Yes | Yes | Yes | No | Yes | Yes | Yes |
| **Keypad** | Yes | No | Limited | Yes | Yes | No | Yes | Yes | Yes |
| **AF Output Power** (internal SP) | 1300 mW typ. | 1300 mW typ. | 1500 mW typ. (10% distortion) | 1300 mW typ. | 1500 mW typ. | 1500 mW typ. | 1000 mW typ. | 800 mW typ. | 800 mW typ. |
| **Intrinsically Safe** | No | No | No | No | No | No | No | No | UL |
| **Encryption** DES | Yes | Yes | No | No | No | No | No | No | No |
| **Encryption** AES | Optional | Optional | No | No | No | No | No | No | No |
| **Voice Scrambler** (Digital) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Voice Scrambler** (Analog)*4 | Yes (Inversion) | Yes (Inversion) | No | Yes (Inversion) | No | No | No | Yes (Inversion) | Yes (Inversion) |
| **OTAP** (Over-the-Air Programming) | Optional | Optional | Yes (Over LTE) | Optional | No | No | No | No | Optional |
| **CTCSS/DTCS** Encoder/Decoder | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **2-Tone** Encoder/Decoder | Yes | Yes | No | Yes | Yes | Yes | No | Yes | Yes |
| **5-Tone** Encoder/Decoder | Yes | Yes | No | Yes | Yes | Yes | No | Yes | Yes |
| **DTMF Autodial** | Yes | Yes | Yes (With optional HM-245T) | Yes | Yes | Yes | No | Yes | Yes |
| **MDC 1200** | Yes | Yes | No | Yes | Yes*5 | Yes*5 | No | Yes | Yes |
| **Man Down** | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes*6 | Yes |
| **Motion Detection Sensor** | Yes | Yes | Yes | Yes | Yes | Yes | No | No | Yes |
| **Lone Worker** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Voice Announcement** | Yes | Yes | No | Yes | Yes | Yes | Yes | No | Yes |
| **Vibration Alert** | Yes | Yes | Yes | Yes | No | No | No | No | Yes |
| **Voice Recorder** | Yes | Yes | Yes | Yes | No | No | No | No | Yes |
| **Bluetooth® Capability** | Yes | Yes | Yes | Yes | No | No | No | No | Yes |
| **GPS Receiver** | Yes | Yes | Yes | External | External | External | No | Yes*6 | No |
| **Multi-Site Conventional** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Type-D Single-site Trunking** | Optional | Optional | No | Optional | Yes | Yes | Yes | Yes | Optional |
| **Type-D Multi-site Trunking** | Optional | Optional | No | Optional | No | No | Yes | Yes | Optional |

# IDAS™ Mobile Radio Feature Comparison

| | IC-F5400D/IC-F6400D SERIES | | IC-F5060D IC-F6060D SERIES | IC-F5330D IC-F6330D | IC-F5120D IC-F6120D SERIES |
|---|---|---|---|---|---|
| | IC-F5400D IC-F6400D | IC-F5400DS IC-F6400DS | IC-F5061D/3D IC-F6061D/3D | IC-F5330D IC-F6330D | IC-F5121D/3D IC-F6121D/3D |
| Frequency Range | 136–174 MHz | | 136–174 MHz | 136–174 MHz | 136–174 MHz |
| | 380–470 MHz 450–512 MHz | | 350–400 MHz 400–470 MHz 450–512 MHz 450–520 MHz | 400–520 MHz | 350–400 MHz 400–470 MHz 450–512 MHz 450–520 MHz |
| Channels | 1024*1 | 99 | 512 | 128 | 128 |
| Digital Channel Spacing | 6.25/12.5 kHz | | 6.25 kHz | 6.25kHz | 6.25 kHz |
| Dimensions (mm; in) (W × H × D; Projections are not included) | 174 × 55 × 150; 6.9 × 2.2 × 5.9 | | 160 × 45 × 150; 6.3 × 1.8 × 5.9 | 150 × 45 × 148; 5.9 × 1.8 × 5.8 | 150 × 40 × 167.5; 5.9 × 1.6 × 6.6 |
| Weight (approx.) | 1.5 kg; 3.3 lb | | 1.3 kg; 2.9 lb | 1.4 kg; 3.1 lb (TBD) | 1.1 kg; 2.4 lb |
| RF output power (High) | 50 W (VHF) 45 W (UHF) | | 50 W (F5061D) 25 W (F5063D) 45 W (F6061D) 25 W (F6063D) | 50 W (VHF) 45 W (UHF) | 50 W (VHF) 45 W (UHF) |
| IP Rating | IP55 | | IP54*7 | IPX4 (Microphone) | N/A |
| Display | Yes | 2-digit numeric | Yes | Yes (Mic.) | Yes |
| Keypad | Yes | | Yes | Yes (Mic.) | Yes |
| AF Output Power (internal SP) | 4 W typ. | | 4 W typ. | 1.5 W typ. (Mic.) | 4 W typ. |
| Encryption — DES | Yes | | No | No | No |
| Encryption — AES | Optional | | No | No | No |
| Voice Scrambler (Digital) | Yes | | Yes | Yes | Yes |
| Voice Scrambler (Analog)*4 | Yes (Inversion) | | Yes (Inversion) | No | No |
| OTAP (Over-the-Air Programming) | Optional | | No | No | No |
| CTCSS/DTCS Encoder/Decoder | Yes | | Yes | Yes | Yes |
| 2-Tone Encoder/Decoder | Yes | | Yes | Yes | Yes |
| 5-Tone Encoder/Decoder | Yes | | Yes | Yes | Yes |
| DTMF Autodial | Yes | | Yes | Yes | Yes |
| MDC 1200 | Yes | | Yes | Yes*5 | Yes |
| Lone Worker | Yes | | Yes | Yes | Yes |
| Voice Announcement | Yes | | No | No | No |
| Voice Recorder | Yes | | No | No | No |
| Bluetooth® Capability | Yes | | No | Yes | No |
| GPS Receiver | Yes*8 | | No | No | No |
| Front Panel Separation | Optional | No | Optional | No | No |
| Multiple Controller Capability | Yes | No | No | No | No |
| COMMANDMIC™ Capability | Yes | No | No | Yes | No |
| I/O Control Port | USB, D-SUB | | D-SUB | Optional*9 | Optional*9 |
| Multi-Site Conventional | Yes | | Yes | Yes | Yes |
| Type-D Single-site Trunking | Optional | | Yes | Yes | Yes |
| Type-D Multi-site Trunking | Optional | | Yes | No | No |

*1 Upgrade licence (ISL-CHEX) required to enable 4000 channel capacity.
*2 With standard battery pack
*3 Conventional mode. 5:5:90 duty cycle, power save ON
*4 Inversion type voice scrambler is not compatible with UT-109R/ UT-110R voice scrambler.
*5 PTT ID, emergency call, radio check (RX) and stun/revive (RX)
*6 Depending on the version.
*7 IP dust and water tests were performed on the controller and RMK-3 only.
*8 UX-241 antenna is required.
*9 D-SUB. Digital modulation input is not available even when using accessory cables.

All stated specifications and features are subject to change without notice or obligation.

# Analog Radio Feature Comparison

| | HANDHELD RADIOS | | | | MOBILE RADIOS | | MURS RADIOS | |
|---|---|---|---|---|---|---|---|---|
| | IC-F1000T<br>IC-F2000T | IC-F1000S<br>IC-F2000S | IC-F1000<br>IC-F2000 | IC-F3001/3<br>IC-F4001/3 | IC-F5021/3/3H<br>IC-F6021/3/3H | IC-F5011/3/3H<br>IC-F6011/3/3H | IC-V10MR | IC-V3MR |
| **Frequency Range** | 136–174 MHz | | | 136–174 MHz | 136–174 MHz | | 151.820, 151.880, 151.940, 154.570, 154.600 MHz | 151.820, 151.880, 151.940, 154.570, 154.600 MHz |
| | 335–380 MHz<br>400–470 MHz<br>450–512 MHz<br>450–520 MHz | | | 350–400 MHz<br>400–470 MHz<br>450–512 MHz<br>450–520 MHz | 400–470 MHz<br>450–512 MHz<br>450–520 MHz | | | |
| **Channels** | 128 | 128 | 16 | 16 | 128 | 8 | 16 | 16 |
| **Channel Spacing** | 12.5/25 kHz | | | 12.5/25 kHz,<br>15/30 kHz | 12.5/25 kHz,<br>15/30 kHz | | 11.25/20 kHz | 11.25/20 kHz |
| **Dimensions*[1] (mm; in)**<br>(W × H × D; Projections are not included) | 52.2 × 111.8 × 24.5;<br>2.1 × 4.4 × 1.0 | | | 56 × 97 × 36.4;<br>2.3 × 4.4 × 1.4 | 150 × 40 × 167.5;<br>5.9 × 1.6 × 6.6 (50/45 W)<br>150 × 40 × 117.5;<br>5.9 × 1.6 × 4.6 (50/45 W) | | 52.2 × 111.8 × 24.5;<br>2.1 × 4.4 × 1.0 | 56 × 97 × 36.4;<br>2.3 × 4.4 × 1.4 |
| **Weight*[1] (approx.)** | 240 g; 8.5 oz | | | 270 g; 9.5 oz | 1.1 kg; 2.4 lb (50/45 W)<br>0.8 kg; 1.8 lb (25 W) | | 240 g; 8.5 oz | 270 g; 9.5 oz |
| **RF output power (High)** — VHF | 5 W | | | 5 W | 50 W (F5021/3H)<br>25 W (F5023) | 50 W (F5011/3H)<br>25 W (F5013) | 2W | 2 W |
| **RF output power (High)** — UHF | 4 W | | | 4 W | 45 W (F6021/3H)<br>25 W (F6023) | 45 W (F6011/3H)<br>25 W (F6013) | | |
| **IP Rating** | IP67 | | | IP54 | N/A | | IP67 | IP54 |
| **Operating Time*[2] (hours)** | 14 | | | 20 (w/ BP-265)<br>14 (w/ BP-264) | N/A | | 16 | 24 |
| **Display** | Yes | Yes | No | No | Yes | LED lighting | No | No |
| **Keypad** | Full | Limited | No | No | Yes | | No | No |
| **AF Output Power (internal SP)** | 1500 mW typ. | | | 800 mW typ. | 4 W typ. | | 1500 mW typ. | 1500 mW typ. |
| **Voice Scrambler** | Yes (Inversion) | | | No | No | | No | No |
| **CTCSS/DTCS** Encoder/Decoder | Yes | | | Yes | Yes | | Yes | Yes |
| **2-Tone** Encoder/Decoder | Yes | | | Yes | Yes | | Yes | Yes |
| **5-Tone** Encoder/Decoder | Yes | | | Yes | Yes | | No | No |
| **DTMF Autodial** | Yes | | | Yes | Yes | | Yes | Yes |
| **MDC 1200** | Yes*[3] | | | Yes*[5] | Yes*[6] | | Yes*[3] | Yes*[5] |
| **Man Down** | Yes | | | No | No | | Yes | No |
| **Lone Worker** | Yes | | | Yes | Yes | | Yes | Yes |
| **Motion Detection Sensor** | Yes | | | No | No | | Yes | No |
| **Voice Announcement** | Yes | | | No | No | | Yes | No |
| **Stun/Kill/Revive** | Yes*[4] | | | Yes*[4] | Yes*[4] | | Yes*[4] | Yes*[4] |
| **Remote Monitor** | Yes*[4] | | | Yes*[4] | Yes*[4] | | Yes*[4] | Yes*[4] |

*[1] With standard battery pack
*[2] 5:5:90 duty cycle, power save ON
*[3] PTT ID, emergency (TX/RX), radio check (RX), stun/revive (RX), transmit status messages only
*[4] RX only
*[5] PTT ID and emergency only
*[6] PTT ID, emergency (TX/RX), radio check (RX), stun/revive (RX) only

All stated specifications and features are subject to change without notice or obligation.

# Satellite PTT & IP Radios – LTE, Hybrid & WLAN Feature Comparsion

| | SATELLITE PTT | |
|---|---|---|
| | **IC-SAT100** | **IC-SAT100M** |
| **Frequency Range** | 1616–1626.5 MHz | 1616–1626.5 MHz |
| **Talkgroups** | 15 (Max.) | 15 (Max.) |
| **Dimensions** (mm; in) (W × H × D; Projections are not included) | 57.8 × 135 × 32.8; 2.3 × 5.3 × 1.3 | Antenna unit (with RF unit): 76.8 × 200 × 76.8; 3 × 7.9 × 3, Main unit: 125 × 29 × 156.5; 4.9 × 1.1 × 6.2 |
| **Weight** (approximate) | 360 g, 12.7 oz (with BP-300 and antenna) | Antenna unit (with RF unit): 500 g, 1.1 lb Main unit with microphone: 1.2 kg, 2.6 lb |
| **IP Rating** | IP67 | IP67 (Antenna unit (with RF unit)), IP55 (mic), IP54 (main unit) |
| **Operating Time** (Hours) | 14.5 | – |
| **Display** | Yes | Yes |
| **Keypad** | Limited | Limited |
| **AF Output Power** (Internal SP) | 1500 mW typical | 1500 mW typical |
| **Encryption**  AES | Yes | Yes |
| **Vibration Alert** | Yes | N/A |
| **Voice Recorder** | Yes | Yes |
| **Bluetooth® Capability** | Yes | Yes |
| **GPS Receiver** | Yes | Yes |
| **Short Data Message** | Yes | Yes |
| **Emergency Call** | Yes | Yes |
| **PoE Capability** | – | Yes |
| **I/O Control Port** | USB, 14-PIN ACC | D-SUB, LAN, Ignition sense |

| | | IP Radios – LTE & Hybrid | | | | IP RADIO – WLAN |
|---|---|---|---|---|---|---|
| | | **IP730D/IP740D** | **IP504H** | **IP501H** | **IP501M** | **IP100H** |
| **Network** (USA Versions) | **LTE** (4G) | B2, B4, B12 | B2, B4, B5, B12, B13, B14, B25, B26, B41, B66, B71 | B2, B4, B5, B17 | B2, B4, B12 | WLAN: IEEE 802.11 a/b/g/n 2.4–2.4835 GHz, 5.15–5.35, 5.47–5.85 GHz |
| | **3G** | B2, B5 | – | B2, B5 | B2, B5 | |
| **Dimensions** (mm; in) (W × H × D; Projections are not included) | | 61.7 × 140.5 × 42.8; 2.4 × 5.5 × 1.7 | 59 × 95 × 32; 2.3 × 3.7 × 1.3 | 59 × 95 × 32; 2.3 × 3.7 × 1.3 | 125 × 29 × 156; 4.9 × 1.1 × 6.1 | 58 × 95 × 26.4 ; 2.3 × 3.7 × 1.0 |
| **Weight** (approximate) | | 320 g, 11.3 oz | TBD | 240 g, 8.5 oz | 840 g, 1.9 lb (main unit) | 205 g, 7.2 oz |
| **IP Rating** | | IP67 | IP67 | IP67 | IP54 | IPX7 |
| **Operating Time** (Hours) | | 24 (LTE mode), 13 (IDAS mode) | 17 | 17 | – | 20 |
| **Display** | | Yes | Yes | Yes | Yes | Yes |
| **Keypad** | | Limited | Limited | Limited | Limited | Limited |
| **AF Output Power** (Internal SP) | | 1500 mW typ. (10% distortion) | 900 mW (10% distortion) | 400 mW (10% distortion) | 4 W (Extrenal SP) | 400 mW typ. (10% distortion) |
| **Provisioning/FOTA** | | Yes | Yes | Yes | Yes | No |
| **Man Down** | | Yes | Yes | Yes | – | No |
| **Lone Worker** | | Yes | Yes | Yes | Yes | No |
| **Vibration Alert** | | No | Yes | Yes | – | Yes |
| **Voice Recorder** | | Yes | Yes | Yes | Yes | No |
| **Bluetooth® Capability** | | Yes | Yes | Yes | Yes | No |
| **GPS Receiver** | | Yes | Yes | Yes | Yes | No |
| **Short Data Message** | | Yes (LTE mode) | Yes | Yes | Yes | Yes |
| **Emergency Call** | | Yes | Yes | Yes | Yes | Yes |
| **I/O Control Port** | | – | – | – | LAN, Ignition sense, D-SUB (optional) | – |

# Optional Accessories for Handheld Radios

| MODEL NAME | BATTERY PACKS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **BP-292UL** Li-ion 7.2 V/1910 mAh (min.) 2010 mAh (typ.) | **BP-300** Li-ion 7.2 V/2200 mAh (min.) 2350 mAh (typ.) | **BP-303** Li-ion 7.2 V/3200 mAh (min.) 3350 mAh (typ.) | **BP-283** Li-ion 7.2 V/1910 mAh (min.) 2010 mAh (typ.) | **BP-284** Li-ion 7.2 V/3070 mAh (min.) 3210 mAh (typ.) | **BP-294** Li-ion 7.2 V/3050 mAh (min.) 3150 mAh (typ.) | **BP-290** Li-ion 7.2 V/1910 mAh (min.) 2010 mAh (typ.) | **BP-280** Li-ion 7.2 V/2280 mAh (min.) 2400 mAh (typ.) | **BP-279** Li-ion 7.2 V/1485 mAh (min.) 1570 mAh (typ.) |
| IC-SAT100 | | ✔ | | | | | | | |
| IP730D, IP740D | | | ✔ | | | | | | |
| IP501H, IP504H | | | | | | | | | |
| IP100H | | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | ✔ | ✔ | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | ✔ | ✔ | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | | | | | | |
| IC-F52D, IC-F62D | | | | | | ✔ | ✔ | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | ✔ | ✔ |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | | | | |
| IC-F52D-UL, IC-F62D-UL | ✔ | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | ✔(For IC-F1000/IC-F2000series)*1 | ✔ |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | | | |

| MODEL NAME | BATTERY PACKS | | | | | | BATTERY CASES | | |
|---|---|---|---|---|---|---|---|---|---|
| | **BP-278** Li-ion 7.2 V/1130 mAh (min.) 1190 mAh (typ.) | **BP-232WP** Li-ion 7.4 V/2200 mAh (min.) 2350 mAh (typ.) | **BP-265** Li-ion 7.4 V/1850 mAh (min.) 2000 mAh (typ.) | **BP-271** Li-ion 7.4 V/1150 mAh (min.) 1200 mAh (typ.) **BP-272** Li-ion 7.4 V/1880 mAh (min.) 2000 mAh (typ.) | **BP-298** Li-ion 7.2 V/3200 mAh (min.) 3350 mAh (typ.) | **BP-307** Li-ion 7.2 V/3050 mAh (min.) 3150 mAh (typ.) | **BP-305** LR6 (AA) ×5 cells | **BP-291** LR6 (AA) ×5 cells | **BP-240** LR03 (AAA) ×6 cells |
| IC-SAT100 | | | | | | | | | |
| IP730D, IP740D | | | | | | | ✔ | | |
| IP501H, IP504H | | | | ✔ | ✔ | | | | |
| IP100H | | | | ✔ | ✔ | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | ✔ | | | | | | | ✔ |
| IC-F52D, IC-F62D | | | | | | | | ✔ | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | ✔ | | | | | | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | ✔ | | | | | | | ✔ |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | ✔(For IC-F1000/IC-F2000series)*1 | | | | | | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | ✔(For IC-F3001/IC-F4001series)*2 | | ✔ (For IC-V3MR) | | | | |

| MODEL NAME | BATTERY CASES | | | CHARGERS | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **BP-261** LR6 (AA) ×6 cells | **BP-263** LR6 (AA) ×6 cells | **BP-273** LR6 (AA) ×3 cells | **BC-241***4 Rapid charger | **BC-219N***4 Rapid charger | **BC-225***4 Intelligent charger | **BC-226** Rapid charger Connectable type | **BC-227***4 Rapid charger | **BC-213***4 Rapid charger |
| IC-SAT100 | | | | ✔ | | | | | |
| IP730D, IP740D | | | | | | | ✔ | ✔ | |
| IP501H, IP504H | | | | | | | | | |
| IP100H | | | ✔ | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | | ✔ | ✔ | | ✔ | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | | ✔ | ✔ | ✔ | ✔ | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | ✔ | | | | | | | | |
| IC-F52D, IC-F62D | | | | | ✔ | ✔ | ✔ | ✔ | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | | ✔ |
| IC-F3230DT/DS, IC-F4230DT/DS | ✔ | | | | | | | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | ✔*3 | ✔*3 | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | | ✔ |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | ✔ | | | | | | | |

*1 Except IC-V10MR  *2 Except IC-V3MR  *3 The battery charger, BC-226, or BC-227 **must not be used** in an explosive atmosphere. *4 AC adapter supplied, depending on charger version.
The IC-F52D-UL/IC-F62D-UL models should only be used with the specified approved options.

# Optional Accessories for Handheld Radios

| MODEL NAME | BC-160*4 Rapid charger | BC-193*4 Rapid charger for BP-265 | BC-240*4 Rapid charger for BP-298 | BC-202IP3L Connectable type Connects up to six BC-202IP3L units. | BC-202*4 / BC-202IP2*4 Rapid charger with smart charging function (Photo shows BC-202IP2) | BC-218*4 Rapid charger with Bluetooth® function | RS-BC225 Intelligent charger software for Windows™ PC | BC-214N*4 Either AD-130 AD-132N or AD-140 is supplied with the BC-214N. | BC-214*4 AD-130 is supplied with the BC-214, depending on version. |
|---|---|---|---|---|---|---|---|---|---|
| **CHARGERS** | | | | | | | **READER SOFTWARE** | **MULTI-CHARGERS** | |
| IC-SAT100 | | | | | | | | ✔ (#30/31, AD-140 installed) | |
| IP730D, IP740D | | | | | | | | ✔ (#62/63, AD-132N installed) | |
| IP501H, IP504H | | | | ✔ | ✔ | ✔ | | | |
| IP100H | | | | ✔ | ✔ | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | | | | ✔ (Use with BC-225) | ✔ (#62/63, AD-132N installed) | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | | | | ✔ (Use with BC-225) | ✔ (#62/63, AD-132N installed) | |
| IC-F3261DT/DS, IC-F3263DT/DS, IC-F4261DT/DS, IC-F4263DT/DS | ✔ | | | | | | | | |
| IC-F52D, IC-F62D | | | | | | | ✔ (Use with BC-225) | ✔ (#62/63, AD-132N installed) | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | ✔ (#42/43, AD-130 installed) | ✔ (#42/43, AD-130 installed), |
| IC-F3230DT/DS, IC-F4230DT/DS | ✔ | | | | | | | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | ✔ (#42/43, AD-130 installed) | ✔ (#42/43, AD-130 installed) |
| IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR | ✔ (For IC-F3001/IC-F4001series)*2 | ✔ (For IC-V3MR) | | | | | | ✔ (#27/28, AD-139 installed for IC-V3MR) | |

| MODEL NAME | BC-197*4 Either AD-121, AD-122 is supplied with the BC-197, depending on version. | BC-211*4 | BC-242 12 V/1 A | BC-123S*5 12 V/1A L-shape plug | BC-123S*5 12 V/1 A straight plug for BC-226/BC-202IP3L single unit | BC-157S 12 V/7.5 A | BC-228 15 V/4 A | BC-207S 12 V/4.2 A | CP-23L For 12 V DC |
|---|---|---|---|---|---|---|---|---|---|
| **MULTI-CHARGERS** | | | **AC ADAPTERS** | | | | | | **CHARGER CABLES** |
| IC-SAT100 | | | ✔ (Use with BC-241) | | | ✔ (Use with BC-214N) | | | |
| IP730D, IP740D | | | | ✔ (Use with BC-227) | ✔ (Use with BC-226) | ✔ (Use with BC-214N) | ✔ (Use with BC-226) | | ✔ (Use with BC-227) |
| IP501H, IP504H | | ✔ (AD-127 installed) | | ✔ (Use with BC-202/IP2) | ✔ (Use with BC-202IP3L) | ✔ (Use with BC-211) | ✔ (Use with BC-202IP3L) | ✔ (Use with BC-218) | ✔ (Use with BC-218) |
| IP100H | | ✔ (AD-127 installed) | | ✔ (Use with BC-202/IP2) | ✔ (Use with BC-202IP3L) | ✔ (Use with BC-211) | ✔ (Use with BC-202IP3L) | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | ✔ (Use with BC-225, BC-227 or BC-219N) | | | ✔ (Use with BC-214N) | | | ✔ (Use with BC-219N or BC-227) |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | ✔ (Use with BC-225, BC-227 or BC-219N) | ✔ (Use with BC-226) | | ✔ (Use with BC-214N) | ✔ (Use with BC-226) | | ✔ (Use with BC-219N or BC-227) |
| IC-F3261DT/DS, IC-F3263DT/DS, IC-F4261DT/DS, IC-F4263DT/DS | ✔ (#22/23, AD-122 installed) | | | ✔ (Use with BC-160) | | ✔ (Use with BC-197) | | | ✔ (Use with BC-160) |
| IC-F52D, IC-F62D | | | ✔ (Use with BC-225, BC-227 or BC-219N) | ✔ (Use with BC-226) | | ✔ (Use with BC-214N) | ✔ (Use with BC-226) | | ✔ (Use with BC-219N or BC-227) |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | ✔ (Use with BC-213) | ✔ (Use with BC-213) | | ✔ (Use with BC-214/N) | | | ✔ (Use with BC-213) |
| IC-F3230DT/DS, IC-F4230DT/DS | ✔ (#22/23, AD-122 installed) | | | ✔ (Use with BC-160) | | ✔ (Use with BC-197) | | | ✔ (Use with BC-160) |
| IC-F52D-UL, IC-F62D-UL | | | | ✔ (Use with BC-227) | | | ✔ (Use with BC-226) | | ✔ (Use with BC-227) |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | ✔ (Use with BC-213) | ✔ (Use with BC-213) | | ✔ (Use with BC-214/N) | | | ✔ (Use with BC-213) |
| IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR | ✔ (#12/13, AD-121 installed for IC-F3001/IC-F4001) | | ✔ (Use with BC-240 for IC-V3MR) | ✔ (Use with BC-191) | | ✔ (Use with BC-197) | | | ✔ (Use with BC-193 or BC-240) |

| MODEL NAME | CP-22 With DC-DC CONVERTER | CP-25H For 12 V DC | OPC-515L | OPC-656 |
|---|---|---|---|---|
| **CHARGER CABLES** | | | **DC POWER CABLES** | |
| IC-SAT100 | | | | ✔ (Use with BC-214N) |
| IP730D, IP740D | | | ✔ (Use with BC-227) | ✔ (Use with BC-214N) |
| IP501H, IP504H | ✔ (Use with BC-218) | ✔ (Use with BC-202IP3L) | | |
| IP100H | | ✔ (Use with BC-202IP3L) | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | ✔ (Use with BC-219N, BC-225 or BC-227) | ✔ (Use with BC-214N) |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | ✔ (Use with BC-219N, BC-225 or BC-227) | ✔ (Use with BC-214N) |
| IC-F3261DT/DS, IC-F3263DT/DS, IC-F4261DT/DS, IC-F4263DT/DS | | | ✔ (Use with BC-160) | ✔ (Use with BC-197) |
| IC-F52D, IC-F62D | | | ✔ (Use with BC-219N, BC-225 or BC-227) | ✔ (Use with BC-214N) |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | ✔ (Use with BC-214/N) |
| IC-F3230DT/DS, IC-F4230DT/DS | | | ✔ (Use with BC-160) | ✔ (Use with BC-197) |
| IC-F52D-UL, IC-F62D-UL | | | ✔ (Use with BC-227) | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | ✔ (Use with BC-214/N) |
| IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR | | | ✔ (Use with BC-193 or BC-240) | ✔ (Use with BC-197 or BC-214N) |

*5 BC-123 for the USA plug. SE for European plug. SV for Australian plug.

✔ : Applicable   ☐ : Not applicable   24

# Optional Accessories for Handheld Radios

## SPEAKER-MICROPHONES

| MODEL NAME | HM-245T (With SUB PTT button, Available later) IP67 | HM-236 IP67 | HM-184UL IP67 | HM-222H (BTL speaker-microphone*6) IP68 | HM-184/H IP67 | HM-168LWP (Waterproof connector) IP67 | HM-158LA | HM-159LA | HM-222HLWP (BTL speaker-microphone*6) |
|---|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | | | | ✔ | | | | | |
| IP730D, IP740D | ✔ | ✔ | | ✔ | ✔ | | | | |
| IP501H, IP504H | | | | | | | | | |
| IP100H | | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | ✔ | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | ✔ | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | | ✔ | | | | |
| IC-F52D, IC-F62D | | | | ✔ | | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | ✔ | ✔ | ✔ | ✔ |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | ✔ | ✔ | ✔ | ✔ |
| IC-F52D-UL, IC-F62D-UL | | | ✔ | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | ✔ | ✔ | ✔ | ✔ |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | ✔ | ✔ | ✔ |

## SPEAKER-MICROPHONES / EARPHONE-MICROPHONES / TIE-CLIP MICROPHONES

| MODEL NAME | HM-222HLS (BTL speaker-microphone) | HM-183LS IPX7 | HM-186LS | HM-215 | HM-153LA | HM-166LA | HM-153LS | HM-166LS | HM-238MC (With SUB PTT button) |
|---|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | | | | | | | | | |
| IP730D, IP740D | | | | | | | | | ✔ |
| IP501H, IP504H | ✔ (For IP504H) | ✔ | ✔ | ✔ (Use with BC-218) | | | ✔ | ✔ | |
| IP100H | | ✔ | ✔ | | | | ✔*7 | ✔*7 | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | | | | | | |
| IC-F52D, IC-F62D | | | | | | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | ✔ | ✔ | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | ✔ | | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | ✔ | ✔ | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | | | |

## TIE-CLIP MICROPHONES / HEADSETS

| MODEL NAME | HM-163MC | HS-94 (Earhook type with boom microphone) | HS-94LWP (Earhook type with waterproof connector) | HS-95 (Behind-the-head type) | HS-95LWP (Behind-the-head type with waterproof connector) | HS-97 (Throat microphone type) | HS-102 (Earphone type) | VS-3 (Bluetooth® headset) |
|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | ✔ | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ |
| IP730D, IP740D | ✔ | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ |
| IP501H, IP504H | | ✔*9 (Use with OPC-2006LS or OPC-2328) | | ✔*9 (Use with OPC-2006LS or OPC-2328) | | ✔*9 (Use with OPC-2006LS or OPC-2328) | ✔ (Use with OPC-2359) | ✔ |
| IP100H | | ✔*9 (Use with OPC-2006LS or OPC-2328) | | ✔*9 (Use with OPC-2006LS or OPC-2328) | | ✔*9 (Use with OPC-2006LS or OPC-2328) | ✔*7 (Use with OPC-2359) | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔*8 | ✔*10 (Use with VS-4MC or VS-5MC) | | ✔*10 (Use with VS-4MC or VS-5MC) | | ✔*10 (Use with VS-4MC or VS-5MC) | | ✔ |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | ✔ (Use with VS-4MC) | | ✔ (Use with VS-4MC) | | ✔ (Use with VS-4MC) | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | ✔ (Use with VS-4MC) | | ✔ (Use with VS-4MC) | | ✔ (Use with VS-4MC) | | |
| IC-F52D, IC-F62D | ✔ | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ (Use with VS-5MC) | | ✔ |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | ✔ (Use with VS-4LA or OPC-2004LA) | ✔ | ✔ (Use with VS-4LA or OPC-2004LA) | ✔ | ✔ (Use with VS-4LA or OPC-2004LA) | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | ✔ (Use with VS-4LA) | | ✔ (Use with VS-4LA) | | ✔ (Use with VS-4LA) | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | ✔ (Use with VS-4LA or OPC-2004LA) | ✔ | ✔ (Use with VS-4LA or OPC-2004LA) | ✔ | ✔ (Use with VS-4LA or OPC-2004LA) | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | ✔ (Use with VS-4LA or OPC-2004LA) | | ✔ (Use with VS-4LA or OPC-2004LA) | | ✔ (Use with VS-4LA or OPC-2004LA) | | |

*6 Increased speaker-microphone volume depends on the combination of the transceiver and microphone. Ask your dealer for possible combination.
*7 Requires either HM-153LS, HM-166LS or HS-102 with OPC-2359 for full-duplex operation.  *8 For IC-F7040T/S only.
25  *9 HS-94, HS-95 and HS-97 headsets are simplex mode operation only.  *10 VS-4MC for IC-F7010/IC-F7020 series, VS-5MC for IC-F7040 series.

# Optional Accessories for Handheld Radios

## PTT SWITCH CABLES / PLUG ADAPTER CABLES / EARPHONES

| MODEL NAME | VS-4MC<br>For manual PTT operation | VS-5MC<br>For manual PTT, VOX operation | VS-4LA<br>For manual PTT operation | OPC-2328<br>For manual PTT operation | OPC-2359 | OPC-2004LA<br>For VOX operation | OPC-2006LS<br>For VOX operation | EH-15B<br>2.5 mm plug | SP-26<br>2.5 mm plug |
|---|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | ✔ (Use with HM-163MC) | ✔ (Use with HM-163MC) |
| IP730D, IP740D | | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | ✔ (Use with HM-163MC or HM-238MC) | ✔ (Use with HM-163MC or HM-238MC) |
| IP501H, IP504H | | | | ✔ (Use with HS-94, HS-95 or HS-97) | ✔ (Use with HS-102) | | ✔ (Use with HS-94, HS-95 or HS-97) | | |
| IP100H | | | | ✔ (Use with HS-94, HS-95 or HS-97) | ✔ (Use with HS-102) | | ✔ (Use with HS-94, HS-95 or HS-97) | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔[*11] (Use with HS-94, HS-95 or HS-97) | ✔[*12] (Use with HS-94, HS-95 or HS-97) | | | | | | ✔[*11] (Use with HM-163MC) | ✔[*11] (Use with HM-163MC) |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | | | |
| IC-F52D, IC-F62D | | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | ✔ (Use with HM-163MC) | ✔ (Use with HM-163MC) |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | | | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | ✔ (Use with HS-94, HS-95 or HS-97) | | | |

## EARPHONES / ACC ADAPTERS / BELT CLIPS

| MODEL NAME | SP-27<br>3.5 mm plug | SP-28<br>2.5 mm plug | SP-29<br>3.5 mm plug | SP-32<br>Tube earphone adapter | SP-40<br>3.5 mm plug | AD-118<br>Allows you to use 6-pin Hirose plug accessories | AD-135<br>3.5 mm jack earphone adapter | MB-135 MB-133<br>MB-127 MB-124<br>MB-94R MBB-3<br>MBB-5<br>Alligator type | MB-136<br>MB-93<br>Swivel type |
|---|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | ✔ (Use with HM-222H or AD-135) | ✔ (Use with HM-163MC) | ✔ (Use with HM-222H or AD-135) | ✔ (Use with EH-15B) | ✔ (Use with HM-222H or AD-135) | ✔ | ✔ | ✔ (Use MBB-5) | |
| IP730D, IP740D | ✔ (Use with HM-222H, HM-245T or AD-135) | ✔ (Use with HM-163MC or HM-238MC) | ✔ (Use with HM-222H, HM-245T or AD-135) | | ✔ (Use with HM-222H, HM-245T or AD-135) | | ✔ | ✔ (Use MB-133) | ✔ (Use MB-136) |
| IP501H, IP504H | | | | | | | | ✔ (Use MB-135) | |
| IP100H | | | | | | | | ✔ (Use MB-127) | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔[*12] (Use with HM-222H or AD-135) | ✔[*12] (Use with HM-163MC) | ✔[*12] (Use with HM-222H or AD-135) | ✔[*12] (Use with EH-15B) | ✔[*12] (Use with HM-222H or AD-135) | ✔ | ✔[*12] | ✔ (Use MB-133) | ✔ (Use MB-136) |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | | | | ✔ | ✔ (Use MB-133) | ✔ (Use MB-136) |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | | | | ✔ | ✔ (Use MB-94R) | ✔ (Use MB-93) |
| IC-F52D, IC-F62D | ✔ (Use with HM-222H or AD-135) | ✔ (Use with HM-163MC) | ✔ (Use with HM-222H or AD-135) | ✔ (Use with EH-15B) | ✔ (Use with HM-222H or AD-135) | ✔ | ✔ | ✔ (Use MBB-3) | ✔ (Use MB-136) |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | ✔ (Use MB-133) | |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | | | ✔ (Use MB-94R) | ✔ (Use MB-93) |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | ✔ (Use MBB-3) | ✔ (Use MB-136) |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | ✔ (Use MB-133) | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | | ✔ (Use MB-124) | |

## BELT HANGERS / CHARGER BRACKET / MOUNT BASE / BRACKET ADAPTOR / CARRYING CASES

| MODEL NAME | MB-96N<br>Swivel type | MB-96F<br>Fixed type | MB-96FL<br>Long type | MB-130 | MBF-1<br>For use with BC-218 | MBA-7<br>For use with BC-218 | LC-195[*13] | LC-191[*13] |
|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | | | | | | | | |
| IP730D, IP740D | ✔ | ✔ | ✔ | | | | ✔ | |
| IP501H, IP504H | | | | | ✔ (Use with MBA-7) | ✔ (Use with MBF-1) | | |
| IP100H | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔ | ✔ | ✔ | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔ | ✔ | ✔ | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | ✔ | ✔ | ✔ | ✔ (Use with BC-160) | | | | |
| IC-F52D, IC-F62D | ✔ | ✔ | ✔ | | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | ✔ (Use with BC-213) | | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | ✔ | ✔ | | ✔ (Use with BC-160) | | | | |
| IC-F52D-UL, IC-F62D-UL | ✔ | ✔ | ✔ | | | | | ✔ |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | ✔ (Use with BC-213) | | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | ✔ (Use with BC-193) | | | | |

*10 VS-4MC for IC-F7010/IC-F7020 series, VS-5MC for IC-F7040 series. *11 For IC-F7010/IC-F7020 series only
*12 For IC-F7040T/S only. *13 Charging is possible while the case is attached.

✔ : Applicable     : Not applicable    26

# Optional Accessories for Handheld Radios

## Carrying Cases / Strap / Docking Station

| MODEL NAME | LC-184*13 | LC-186*13 | LC-187*13 / LC-190*13 | LC-188 | LC-183*13 | LC-185*13 | MB-57L Long shoulder strap | BC-247*15 Charging cradle |
|---|---|---|---|---|---|---|---|---|
| | | | For use with BP-290 / For use with BP-294 (Photo shows LC-187) | For use with BP-290 | For use with BP-271 | For use with BP-272 | | |
| IC-SAT100 | | | | | | | | ✔ |
| IP730D, IP740D | | | | | | | ✔ (Use with LC-195) | |
| IP501H, IP504H | | | | | ✔ | ✔ | ✔ (Use with LC-183 or LC-185) | |
| IP100H | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔ | | | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔*14 | ✔*14 | | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | | | | | |
| IC-F52D, IC-F62D | | | ✔ | ✔ | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | | | |
| IC-F52D-UL, IC-F62D-UL | | | | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | | |

## Antennas / Cut Antennas / High Gain Antennas

| MODEL NAME | FA-S81V 136–150 MHz / FA-S82V 148–162 MHz / FA-S83V 160–174 MHz / FA-S81U 380–430 MHz / FA-S82U 430–480 MHz / FA-S83U 470–520 MHz | FA-SC25V 136–150 MHz / FA-SC55V 150–174 MHz / FA-SC25U 400–430 MHz / FA-SC57U 430–470 MHz / FA-SC72U 470–520 MHz | FA-SC28V 148–162 MHz / FA-SC29V 160–174 MHz | FA-SC01U 350–400 MHz / FA-SC02U 330–380 MHz / FA-SC03U 380–430 MHz | FA-S100U 760–870 MHz | FA-S67VC 136–174 MHz / FA-S76UC 380–520 MHz | FA-SC61VC 136–174 MHz / FA-SC61UC 380–520 MHz | FA-SC62V 150–160 MHz / FA-SC63V 155–165 MHz |
|---|---|---|---|---|---|---|---|---|
| IC-SAT100 | | | | | | | | |
| IP730D, IP740D | | ✔ | ✔ | ✔ | | | ✔ | ✔ |
| IP501H, IP504H | | | | | | | | |
| IP100H | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔ | | | | | ✔ | ✔ | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔ | | | | | | ✔ | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | ✔ | | ✔ (Use FA-SC01U or FA-SC03U) | | | ✔ | ✔ |
| IC-F52D, IC-F62D | | ✔ (Except FA-SC55V) | ✔ | ✔ (Use FA-SC01U) | | | ✔ | ✔ |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | ✔ | ✔ | ✔ (Use FA-SC01U or FA-SC02U) | | | ✔ | |
| IC-F3230DT/DS, IC-F4230DT/DS | | ✔ | | ✔ (Use FA-SC01U or FA-SC03U) | | | ✔ | ✔ |
| IC-F52D-UL, IC-F62D-UL | | ✔ (Except FA-SC55V) | ✔ | ✔ (Use FA-SC01U) | | | ✔ | ✔ |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | ✔ | ✔ (Use FA-SC28V for IC-V10MR) | ✔ (Use FA-SC02U) | | | ✔ | ✔ |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | ✔ | ✔ (Use FA-SC28V for IC-V3MR) | ✔ (Use FA-SC01U or FA-SC03U) | | | ✔ | ✔ |

## Stubby Antennas / Satellite + GPS Antennas

| MODEL NAME | FA-S81VS 136–150 MHz / FA-S82VS 148–162 MHz / FA-S83VS 160–174 MHz / FA-S81US 400–450 MHz / FA-S82US 450–490 MHz | FA-SC26VS 136–144 MHz / FA-SC27VS 142–150 MHz / FA-SC56VS 150–162 MHz / FA-SC57VS 160–174 MHz / FA-SC26US 400–450 MHz / FA-SC73US 450–490 MHz | FA-S103U Quick release connecter | FA-S102U | AH-38 OPC-2113 or user supplied coaxial cable required. | AH-40 1.5 m; 16.4 ft cable length | AH-41*16 OPC-2462 or user supplied coaxial cable required. |
|---|---|---|---|---|---|---|---|
| IC-SAT100 | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| IP730D, IP740D | | ✔ | | | | | |
| IP501H, IP504H | | | | | | | |
| IP100H | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | ✔ | | | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔ | | | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | ✔ | | | | | |
| IC-F52D, IC-F62D | | ✔ | | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | ✔ | | | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | ✔ | | | | | |
| IC-F52D-UL, IC-F62D-UL | | ✔ | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | ✔ | | | | | |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | ✔ | | | | | |

*13 Charging is possible while the case is attached.  *14 LC-184 for use with IC-F3400DT/DS, IC-F4400DT/DS. LC-186 for use with IC-F3400D, IC-F4400D.

27 *15 Comes with DC power cable, AC adapter and adapter cable (DC to AC).  *16 Supplied with 1.5 m, 4.9 ft coaxial cable, power box, AC adapter and mounting kit.

# Optional Accessories for Handheld Radios

| MODEL NAME | COAXIAL CABLES | | | ZONE COPY CABLES | | APPLICATIONS | | SPEAKERPHONE UNIT | PROGRAMMING SOFTWARE |
|---|---|---|---|---|---|---|---|---|---|
| | OPC-2422 For AH-40 (5 m; 16.4 ft) | OPC-2462 For AH-41 (59 m; 193.5 ft) | OPC-2113 For AH-38 (10 m, 32.8 ft) | OPC-1870 Handheld to handheld | OPC-2362 Handheld to mobile | RS-SAT100 For Android™ For iOS™ | IP500APP LTE radio mobile application*17 | VE-SP1 (IP radio is not supplied.) | CS-V10MR CS-V3MR For Windows™ |
| IC-SAT100 | ✔ | ✔ | ✔ | | | ✔ | | | |
| IP730D, IP740D | | | | | | | ✔ | | |
| IP501H, IP504H | | | | | | | ✔ | ✔ | |
| IP100H | | | | | | | | | |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | | | ✔ | ✔ | | | | |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | | | | ✔ | ✔ | | | | |
| IC-F3261DT/DS, IC-F3263DT/DS IC-F4261DT/DS, IC-F4263DT/DS | | | | ✔ | | | | | |
| IC-F52D, IC-F62D | | | | ✔ | | | | | |
| IC-F1100DT/DS/D, IC-F2100DT/DS/D | | | | | | | | | |
| IC-F3230DT/DS, IC-F4230DT/DS | | | | | | | | | |
| IC-F52D-UL, IC-F62D-UL | | | | ✔ | | | | | |
| IC-F1000/T/S, IC-F2000/T/S, IC-V10MR | | | | | | | | | ✔ (Use CS-V10MR for IC-V10MR) |
| IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR | | | | | | | | | ✔ (Use CS-V3MR for IC-V3MR) |

*17 For iOS™: iOS™ version 12 or later. For Android™: Android™ version 8.0 or later  This service may not be available depending on the country/region.

# Optional Accessories for Mobile Radios

| MODEL NAME | HAND MICROPHONES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | HM-220 Heavy-duty type IP54 | HM-220T Heavy-duty type with DTMF keypad IP54 | HM-221 IP55 | HM-221T DTMF keypad type IP55 | HM-211 Active Noise Canceling | HM-152 | HM-152T DTMF keypad type | HM-148G Heavy-duty type | HM-148T Heavy-duty type with DTMF keypad |
| IC-SAT100M | | | | | | | | | |
| IP501M | | | | | | | | | |
| IC-F7510, IC-F7520, IC-F7540 | ✔ | ✔ | ✔ | ✔ | | | | | |
| IC-F9511HT | | | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| IC-F5400D, IC-F6400D | ✔ | ✔ | ✔ | ✔ | | | | | |
| IC-F5400DS, IC-F6400DS | ✔ | ✔ | ✔ | ✔ | | | | | |
| IC-F5061/D, IC-F5063/D IC-F6061/D, IC-F6063/D | | | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| IC-F5330D, IC-F6330D | | | | | | | | | |
| IC-F5121D, IC-F5123D IC-F6121D, IC-F6123D | | | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H | | | | | | ✔ | ✔ | ✔ | ✔ |
| IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H | | | | | | ✔ | ✔ | ✔ | ✔ |

| MODEL NAME | SPEAKER-MICROPHONE | HEADSET | DESKTOP MICROPHONES | | EXTERNAL SPEAKERS | | SEPARATION KITS | |
|---|---|---|---|---|---|---|---|---|
| | HM-241 | VS-3 Bluetooth® headset | SM-29 | SM-26 SM-28 | SP-30 | SP-35 With 2 m; 6.5 ft cable SP-35L With 6 m; 19.7 ft cable | RMK-5 | RMK-7 Dual-head |
| IC-SAT100M | | ✔ | | | ✔ | ✔ | | |
| IP501M | ✔ | ✔ | | ✔ (Use SM-28) | ✔ | ✔ | | |
| IC-F7510, IC-F7520, IC-F7540 | | ✔ | ✔ | | ✔ | ✔ | ✔ (Separation cable is required) | ✔ (Separation cable is required) |
| IC-F9511HT | | | | ✔ (Use SM-26) | ✔ | ✔ | | |
| IC-F5400D, IC-F6400D | | | ✔ | | ✔ | ✔ | ✔ (Separation cable is required) | ✔ (Separation cable is required) |
| IC-F5400DS, IC-F6400DS | | | ✔ | | ✔ | ✔ | | |
| IC-F5061/D, IC-F5063/D IC-F6061/D, IC-F6063/D | | | | ✔ (Use SM-26) | ✔ | ✔ | | |
| IC-F5330D, IC-F6330D | | | ✔ | | ✔ | ✔ | | |
| IC-F5121D, IC-F5123D IC-F6121D, IC-F6123D | | | | ✔ (Use SM-26) | ✔ | ✔ | | |
| IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H | | | | ✔ (Use SM-26) | ✔ | ✔ | | |
| IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H | | | | ✔ (Use SM-26) | ✔ | ✔ | | |

✔ : Applicable   : Not applicable   28

# Optional Accessories for Mobile Radios

| MODEL NAME | SEPARATION KITS | COMMANDMIC™ | | SEPARATION CABLES | | | GPS ANTENNA | ACC CABLES | |
|---|---|---|---|---|---|---|---|---|---|
| | RMK-3 | HM-218 Secondary controller for use with RMK-5 IP55 | HM-230HB IP55 | OPC-2367 8 m; 26.2 ft / OPC-2366 5 m; 16.4 ft / OPC-2365 3 m; 9.8 ft / OPC-2364 1.9 m; 6.2 ft | OPC-2373 1.9 m; 6.2 ft / OPC-2374 8 m; 26.2 ft | OPC-608 8 m; 26.2 ft / OPC-726 5 m; 16.4 ft / OPC-607 3 m; 9.8 ft / OPC-609 1.9 m; 6.2 ft | UX-241 5 m; 16.4 ft cable length | OPC-1939 D-SUB 15-pin type | OPC-2078 D-SUB 25-pin type |
| IC-SAT100M | | | | | | | | | |
| IP501M | | | ✔ | | | | | | |
| IC-F7510, IC-F7520, IC-F7540 | | ✔ (Separation cable is required) | | ✔ (Use with RMK-5 or RMK-7) | ✔ (Use with HM-218) | | ✔ | | |
| IC-F9511HT | | | | | | ✔ | | | |
| IC-F5400D, IC-F6400D | | ✔ (Separation cable is required) | | ✔ (Use with RMK-5 or RMK-7) | ✔ (Use with HM-218) | | ✔ | | |
| IC-F5400DS, IC-F6400DS | | | | | | | ✔ | | |
| IC-F5061/D, IC-F5063/D IC-F6061/D, IC-F6063/D | ✔ | | | | | ✔ (Use with RMK-3) | | | |
| IC-F5330D, IC-F6330D | | | | | | | | ✔ *18 | ✔ *18 |
| IC-F5121D, IC-F5123D IC-F6121D, IC-F6123D | | | | | | | | ✔ *18 | ✔ *18 |
| IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H | | | | | | | | ✔ | ✔ |
| IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H | | | | | | | | ✔ | ✔ |

| MODEL NAME | ACC CABLES | ZONE COPY CABLES | | MICROPHONE CABLES | | SAT ANTENNA | COAXIAL CABLE | AC ADAPTER | APPLICATION |
|---|---|---|---|---|---|---|---|---|---|
| | OPC-2407 D-SUB 25-pin type | OPC-2362 Mobile to handheld | OPC-1871 Mobile to handheld / OPC-1532 Mobile to mobile (Photo shows OPC-1871) | OPC-2355 2.5 m; 8.2 ft cable length | OPC-2429 For use with the supplied speaker microphone (2 m, 6.5 ft) | AH-40 Satellite + GPS antenna (1.5 m; 16.4 ft cable) | OPC-2422 For AH-40 (5 m; 16.4 ft) | BC-157S 12 V/7.5 A | RS-SAT100 For Android™ For iOS™ |
| IC-SAT100M | | | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| IP501M | ✔ | | | ✔ (Use with HM-230HB or HM-241) | | | | | |
| IC-F7510, IC-F7520, IC-F7540 | | ✔ | | | | | | | |
| IC-F9511HT | | | ✔ | | | | | | |
| IC-F5400D, IC-F6400D | | ✔ | | | | | | | |
| IC-F5400DS, IC-F6400DS | | ✔ | | | | | | | |
| IC-F5061/D, IC-F5063/D IC-F6061/D, IC-F6063/D | | | | | | | | | |
| IC-F5330D, IC-F6330D | | | | | | | | | |
| IC-F5121D, IC-F5123D IC-F6121D, IC-F6123D | | | | | | | | | |
| IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H | | | | | | | | | |
| IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H | | | | | | | | | |

*18 Digital modulation input is not available even when using accessory cables.

# Activation Keys for Handheld and Mobile Radios

| MODEL NAME | ACTIVATION KEYS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ISL-3 APCO P25 Trunking Phase 1 | ISL-P25TR APCO P25 Trunking Phase 1 | ISL-P25P2 APCO P25 Trunking Phase 2 | ISL-P25AES AES Encryption Activation Key | ISL-P25VS APCO P25 Conventional Voting Scan | ISL-P25DS APCO P25 Packet Data Service (GPS/Text) | ISL-P25FP Front Panel Programming | ISL-P25W 25 kHz Activation Key (for USA version transceivers) |
| IC-F7010T/S, IC-F7020T/S, IC-F7040T/S | | ✔ | ✔ | ✔ (Use with UT-134) | ✔ | ✔ | ✔ | ✔ |
| IC-F7510, IC-F7520, IC-F7540 | | ✔ | ✔ | ✔ (Use with UT-134) | ✔ | ✔ | ✔ | ✔ |
| IC-F9511HT | ✔ | | | | | | | |

| MODEL NAME | ACTIVATION KEYS | | | | |
|---|---|---|---|---|---|
| | ISL-UGMTR NXDN™ Type-D Trunking Upgrade Key | ISL-AKAES AES Encryption Activation Key | ISL-CHEX Channel Expansion Key increases channel number up to 4000 | ISL-AKSTM Dealer Set Mode Activation Key | ISL-AK25K 25 kHz Activation Key (for USA version transceivers) |
| IC-F3400DT/DS/D, IC-F4400DT/DS/D | ✔ | ✔ (Use with UT-134) | ✔ | ✔ | ✔ |
| IC-F52D, IC-F62D | ✔ | | | | ✔ |
| IC-F52D-UL, IC-F62D-UL | ✔ | | | | ✔ |
| IC-F5400D/DS, IC-F6400D/DS | ✔ | ✔ (Use with UT-134) | ✔ | ✔ | ✔ |

# Optional Accessories for Repeaters

| MODEL NAME | CHANNEL MODULES<br>UR-FR5300<br>136–174 MHz, 50 W<br>UR-FR6300<br>330–400, 400–470, 450–512, 450–520 MHz, 50 W | NETWORK CONTROLLER<br>UC-FR5300*19 | IDAS™ SOFTWARE<br>CF-FR5000MC<br>Multi-site conventional software for UC-FR5300 | CF-FR5000MT<br>Type-D Multi-site trunking software for UC-FR5300 | CF-FR5300SC<br>Simulcast conventional software for UC-FR5300 | GPS ANTENNA<br>UX-241<br>5 m; 16.4 ft cable length | HAND MICROPHONE<br>HM-152 | DESKTOP MICROPHONE<br>SM-26 | EXTERNAL SPEAKER<br>SP-35<br>2 m; 6.5 ft cable<br>SP-35L<br>6 m; 19.7 ft cable |
|---|---|---|---|---|---|---|---|---|---|
| IC-FR9010, IC-FR9020 | | | | | | | | | |
| IC-FR5300, IC-FR6300 | ✔ | ✔ | ✔ (Use with UC-FR5300) | ✔ (Use with UC-FR5300) | ✔ (Use with UC-FR5300) | ✔ | ✔ | ✔ | ✔ |

*19 The following versions are available. #11: CF card not included (Type-D single-site trunking) #12: CF-FR5000MC included  #13: CF-FR5000MT included  #14: CF-FR5300SC included

# Optional Accessories for RoIP Gateway and IP Products

| MODEL NAME | AC ADAPTERS<br>BC-207S<br>12 V/4.2 A | BC-147S*20<br>12 V/0.25 A | AUDIO CONNECTION CABLES<br>OPC-2273<br>For VHF marine transceiver<br>5 m; 16.4 ft | OPC-2390<br>For IC-FR5000 series<br>5 m; 16.4 ft | OPC-2275<br>For mobile transceiver<br>5 m; 16.4 ft | OPC-2276<br>For HM-152 or SM-26<br>5 m; 16.4 ft | OPC-2389<br>For RS-232 serial connection<br>5 m; 16.4 ft | OPC-2412<br>For IC-SAT100<br>5 m; 16.4 ft |
|---|---|---|---|---|---|---|---|---|
| VE-PG4 | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| AP-95M | ✔ | | | | | | | |
| IP100FS | | ✔ (Use with CT-23) | | | | | | |
| RC-FS10 | | ✔ (Use with CT-23) | | | | | | |

| MODEL NAME | SPEAKER-MICROPHONE<br>HM-241 | HAND MICROPHONES<br>HM-152 | HM-152T<br>DTMF keypad type | HM-216<br>Short cable*22 | DESKTOP MICROPHONE<br>SM-26 | DIGITAL VOICE CONVERTER<br>CT-24<br>For more than five digital radio connections | MICROPHONE ADAPTER<br>CT-23 | ACCESS POINT MANAGER<br>RS-AP3 |
|---|---|---|---|---|---|---|---|---|
| VE-PG4 | ✔ | ✔ *21 | ✔ *21 | ✔ *21 | ✔ *21 | ✔ | | |
| AP-95M | | | | | | | | ✔ |
| IP100FS | | ✔ (Use with CT-23 and BC-147S) | | | ✔ (Use with CT-23 and BC-147S) | | ✔ (Use with SM-26 or HM-152) | |
| RC-FS10 | | ✔ (Use with CT-23 and BC-147S) | | | ✔ (Use with CT-23 and BC-147S) | | ✔ (Use with SM-26 or HM-152) | |

*20 BC-147SA for the USA plug. SE for European plug. SV for Australian plug.
*21 The HM-152, HM-152T, HM-216 and SM-26 has no Speaker function. An external speaker is required to be connected to the VE-PG4 to hear received audio with these accessories.
*22 The HM-216 has a total of 490 mm cable length including a 300 mm curl code, while the HM-152 has a total of 900 mm cable length.

# Optional Accessories for HF Radio

| MODEL NAME | HAND MICROPHONE<br>HM-193 | REMOTE CONTROL MIC<br>HM-192 | SEPARATION KIT<br>RMK-6<br>For controller attached version | SEPARATION CABLES<br>OPC-608 8 m; 26.2 ft<br>OPC-726 5 m; 16.4 ft<br>OPC-607 3 m; 9.8 ft<br>OPC-609 1.9 m; 6.2 ft | AUTOTUNING ANTENNA<br>AH-740<br>2.5–30 MHz Compact type | EXTERNAL SPEAKERS<br>SP-30 | SP-35<br>With 2 m; 6.5 ft cable<br>SP-35L<br>With 6 m; 19.7 ft cable |
|---|---|---|---|---|---|---|---|
| IC-F8101 | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |

| MODEL NAME | GPS UNIT<br>UX-248<br>Can be used with Enhanced version. | GPS/MODEM CABLE<br>OPC-2308 | ANTENNA TUNER<br>AT-140 | ANTENNA ELEMENT<br>AH-2b | SHIELDED CONTROL CABLE<br>OPC-2309<br>10 m; 32.8 ft | MOUNTING BRACKET<br>MB-126 | COOLING FAN<br>CFU-F8100 |
|---|---|---|---|---|---|---|---|
| IC-F8101 | ✔ | ✔ | ✔ | ✔ (Use with AT-140) | ✔ (Use with AT-140) | ✔ | ✔ |

Some options may not be available in some countries. Please ask your dealer for details.
Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

✔ : Applicable    : Not applicable   30

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